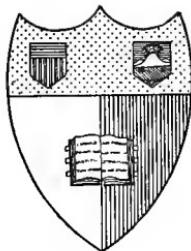


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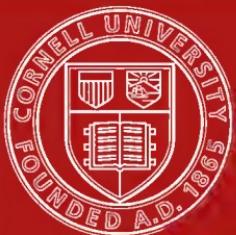
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Distribution of income by states in 1919



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NO. 3

DISTRIBUTION OF INCOME BY STATES  
IN 1919



# DISTRIBUTION OF INCOME BY STATES IN 1919

BY

OSWALD W. KNAUTH

OF THE STAFF OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH



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## PREFATORY NOTE

The "Distribution of Income by States in 1919" is a by-product of the volumes on "Income in the United States" which have already been published by the Bureau. It is one of a series of studies which the Bureau is undertaking in connection with its main topics of research and which may later be collected in a formal volume. It is issued at this time in order to meet the special needs of many investigators concerned with the comparative capacity of the various states to bear increased taxes, to buy goods of various sorts, to absorb securities, etc. It also indicates the relative importance of agriculture in the different sections of the country.

The present study undertakes to distribute the aggregate income of the American people among the States on the basis of such official data and other indices as are available. This distribution is based on data for 1919, and no single year is "typical." The small incomes received by farmers in Montana after the bad weather of 1919 certainly do not represent average conditions and probably less striking anomalies exist among the figures for other States. However, the distribution must rest upon the State data gathered by the Census and those data are to be had only for 1919.

The reader who is looking for results, and is not interested in the method, will find these results presented in tabular form on pages 25 to 30.

Like all publications of the National Bureau of Economic Research, this paper has been submitted for criticism to the Bureau's directors and approved by them. Hearty thanks are due to members of the Board for their help in improving what remains at best a rough set of approximations.

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# THE DISTRIBUTION OF INCOME BY STATES

in 1919

## I. INTRODUCTION

In a previous publication of this Bureau, the income of the United States in 1919 was estimated at 66.7 billion dollars.<sup>1</sup> This estimate was based on the incomes received by gainfully employed persons, and was divided into the following categories—

### INCOME OF THE UNITED STATES, 1919

	Billion dollars
Income of persons receiving over \$2,000 per year (excluding farmers and farm laborers).....	\$18.90
Income of persons receiving under \$2,000 per year (excluding farmers and farm laborers).....	32.65
Income of Farm Laborers.....	2.30
Income of Farmers.....	10.85
Corporate Surplus.....	2.00
Total.....	<u>\$66.70</u> <sup>2</sup>

Many of the items on which these estimates for the country rest are available also by States. The Bureau of the Census has published in its advance bulletins the number of gainfully employed persons on January 1, 1920 and most of the details concerning farmers. The Bureau of Internal Revenue has published by States the amount of income reported under the income-tax law. Where direct data of this kind are lacking, it is possible to construct index numbers which can be used to distribute parts of the total National Income among the 48 States. Such State estimates, of course, cannot have the same accuracy as the larger estimate of the National Income, if for no other reason than that a small error is more important in a small total than it is in a large one.

For many purposes, it is quite as important to know the proportions of income received by States as it is to know the total for the country. Cer-

<sup>1</sup> *Income in the United States*, Volume II, chap. 26. Harcourt, Brace & Company.

<sup>2</sup> The amount distributed in the summary table below is 66.2 billion dollars; the difference of one-half billion dollars being the amount paid to soldiers which it was impossible to distribute among states in 1919.

tain details of this State distribution are particularly interesting: for example, the variations of per-capita income, the varying proportions of farmers' income to the total income, and the distribution of farmers' income.

## II. THE METHOD

### A. The Income of Persons Receiving Over \$2,000 per Year. (Excluding Farmers)

The income of persons receiving over \$2,000 per year (excluding farmers) has been treated in the following manner: The amount shown for each State in the official *Statistics of Income*, 1919, has been listed. This amount requires adjustment for the present purpose in three ways: first, it includes a part, but only a part, of the incomes in the ranges between \$1,000 and \$2,000; second, it includes income due to agriculture; and third, it does not include income which should have been, but was not, reported. In order to make these adjustments, (1) the amounts reported in the income-range \$1,000-\$2,000 have been subtracted from the total of each state; (2) the amount reported as due to agriculture, \$1,211 million, has been apportioned according to the percentage of farmers' incomes in each state and the ratio which the average farmers' incomes of each state are to the average farmers' incomes of the whole country; and (3) the resulting income in each state as left by these two adjustments has been raised to bring the sum for all the States to the estimated national total of \$17,500 million. (See *Income in the United States*, volume II, Chapter 22.) The last adjustment appears to be the least satisfactory; it involves the tacit assumption that the evasion of income taxes by failure to report and under-reporting is uniform in all states—an assumption which may or may not be valid.<sup>1</sup>

Next the non-taxable income must be apportioned. The income from homes owned by the individuals occupying them, amounting to 700 million dollars, has been distributed among the States according to the percentage of the total income-tax payers resident in each State. The remaining tax-exempt income, mostly interest on exempted bonds, amounted to 710 million dollars in 1919. This sum has been apportioned according to the total income of persons having \$25,000 or more per year in the several States. The reason for this is that the exempt income appears to be highly concentrated in the higher range of incomes.

<sup>1</sup> "I am enclosing my approval of the publication of the section on the Distribution of Income by States. I want to place myself on record, however, as believing that the facts are not in accordance with the presumption that there is an equal amount of failure to report and of under-reporting in every state. In my opinion there is evidence in the income tax statistics themselves that there are very large differences in the degree of accuracy of these figures in different states. Nevertheless, the question is so difficult, and is in particular so full of political dynamite that I do not see that the Bureau could possibly adopt any other course than the one it has followed."—Allyn A. Young.

## THE METHOD

TABLE 1  
DISTRIBUTION OF NON-AGRICULTURAL INCOMES OVER \$2,000 BY STATES  
1919  
(Thousands of Dollars)

State	Reported total over \$2,000	Estimated farmers' income	Reported, less farmers' income	Adjusted for under- reporting	Tax-exempt income from homes	Other tax- exempt income	Total
<i>New England Division</i>							
Maine.....	\$ 98,741	\$ 6,559	\$ 87,182	\$ 96,667	\$ 4,550	\$ 2,403	\$ 103,620
New Hampshire.....	62,889	782	62,107	68,864	3,360	1,633	73,857
Vermont.....	38,801	2,762	36,039	39,960	1,750	1,300	43,010
Massachusetts.....	947,364	1,546	945,818	1,048,723	35,210	55,138	1,139,071
Rhode Island.....	120,132	150	119,982	133,036	5,250	7,128	145,414
Connecticut.....	269,666	1,193	268,473	297,683	14,490	11,537	323,710
<i>Middle Atlantic Division</i>							
New York.....	3,099,690	32,781	3,066,909	3,400,589	89,670	236,998	3,727,257
New Jersey.....	708,259	5,188	703,071	779,635	30,450	26,866	836,951
Pennsylvania.....	1,482,358	25,743	1,456,615	1,615,095	70,770	73,144	1,759,009
<i>East North Central Division</i>							
Ohio.....	899,500	49,216	850,284	942,795	40,460	34,477	1,017,732
Indiana.....	352,018	39,979	312,039	345,989	17,080	6,733	369,802
Illinois.....	1,468,262	97,055	1,371,207	1,520,394	55,440	53,803	1,629,637
Michigan.....	570,907	26,963	543,944	603,125	23,870	25,233	652,278
Wisconsin.....	275,289	38,075	237,214	263,023	13,860	5,859	282,742
<i>West North Central Division</i>							
Minnesota.....	314,568	40,632	273,936	303,740	16,240	8,839	328,819
Iowa.....	491,582	110,218	381,364	422,856	17,570	4,491	444,917
Missouri.....	407,376	34,485	372,891	413,462	16,450	13,930	443,842
North Dakota.....	62,890	22,155	40,735	45,167	3,570	236	48,973
South Dakota.....	119,766	30,552	89,214	98,920	5,040	541	104,501
Nebraska.....	242,528	61,831	180,697	200,357	11,480	3,102	214,939
Kansas.....	235,772	55,966	179,806	199,369	10,010	3,337	212,716

## THE DISTRIBUTION OF INCOME BY STATES

TABLE 1—Continued

State	Reported total over \$2,000	Estimated farmers' income	Reported, less farmers' income	Adjusted for under-reporting	Tax-exempt income from homes	Other tax-exempt income	Total
<i>South Atlantic Division</i>							
Delaware.....	\$ 52,758	\$ 1,863	\$ 50,895	\$ 56,432	\$ 2,170	\$ 4,001	\$ 62,603
Maryland.....	329,624	5,280	324,344	359,633	15,260	13,014	387,907
District of Columbia.....	122,725		122,725	136,077	7,700	4,637	148,414
Virginia.....	205,831	13,518	192,315	213,239	9,940	4,539	227,718
West Virginia.....	124,501	3,725	120,776	133,916	5,950	3,248	143,114
North Carolina.....	150,103	33,503	116,600	129,286	4,900	5,313	139,499
South Carolina.....	129,908	27,744	102,064	113,169	4,900	2,419	120,488
Georgia.....	195,700	32,245	163,455	181,237	7,770	4,910	193,917
Florida.....	91,833	2,621	89,212	98,918	4,060	2,155	105,133
<i>East South Central Division</i>							
Kentucky.....	191,608	14,692	176,916	196,164	7,840	3,548	207,552
Tennessee.....	170,615	13,561	157,054	174,141	6,650	5,358	186,149
Alabama.....	113,702	13,374	100,328	111,243	5,390	2,487	119,120
Mississippi.....	92,086	16,028	76,058	84,333	3,150	3,180	90,663
<i>West South Central Division</i>							
Arkansas.....	113,788	18,206	95,562	105,959	4,480	1,790	112,229
Louisiana.....	173,160	8,975	164,185	182,048	6,930	7,952	196,930
Oklahoma.....	219,372	55,193	164,179	182,042	8,050	5,684	195,776
Texas.....	569,243	104,142	455,101	504,616	23,170	16,159	543,945
<i>Mountain Division</i>							
Montana.....	78,589	63	78,526	87,070	5,600	668	93,338
Idaho.....	54,699	11,724	42,975	47,651	2,800	300	50,751
Wyoming.....	41,375	2,034	39,341	43,621	2,380	591	46,592
Colorado.....	160,118	17,663	142,455	157,954	7,560	3,761	169,275
New Mexico.....	26,765	2,512	24,253	26,892	1,400	272	28,564
Arizona.....	49,651	5,674	43,977	48,762	2,660	781	52,203
Utah.....	50,778	5,228	45,550	50,506	2,800	483	53,789
Nevada.....	14,046	2,062	11,984	13,288	1,120	72	14,480
<i>Pacific Division</i>							
Washington.....	244,633	23,817	220,816	244,841	14,980	4,669	264,490
Oregon.....	137,390	9,565	127,825	141,732	6,510	3,855	152,117
California.....	832,028	82,834	749,194	830,706	35,000	27,356	893,062
<b>Total.....</b>	<b>\$16,989,869</b>	<b>\$1,211,677</b>	<b>\$15,778,192</b>	<b>\$17,494,925</b>	<b>\$697,690</b>	<b>\$710,000</b>	<b>\$18,902,615</b>

B. Income of Persons Receiving under \$2,000 per year. (Excluding Farmers)

In apportioning the total sum of wages received by persons having less than \$2,000 per year it is necessary to allow for: (1) differences in the general level of wages in different States, and (2) differences in the relative numbers of persons following high-paid and low-paid occupations. A sample table is appended to illustrate the method used.

The number of persons gainfully employed on January 1st in each of the eight main groups under which the Census classifies the occupation returns is reported by States in the Census of 1920. From these data and from the estimated number of persons having incomes over \$2,000, it is possible to approximate the number of persons in each occupation group in each State having incomes less than \$2,000. To this end, the number of persons in each occupation group as reported by the Census has been adjusted in the ratio applied to that occupation group in the estimate for the whole country. These reducing ratios are computed from Tables 23E, F, and G of *Income in the United States*, volume II, chapter 23. From this point forward, the general method of estimating the total wages in each State is the same as that used for the United States. This procedure consists in multiplying the number of persons in each occupation group by the average wages for the corresponding group, and adding together the products in order to find the total wages in each state.

While this computation gives the estimated total payments for personal services, it does not show the total income from all sources. In Chapter 23 of *Income in the United States*, it was estimated that in the case of persons receiving less than \$2,000 per year, income from other sources was about 9.5 per cent of the income from wages. This percentage was therefore added to wages in order to arrive at the total income in each State of persons receiving less than \$2,000. The results are shown in the summary table.

The following form was used for estimating the total income of wage and salary earners in each State. A complete transcription of the original data used in making the estimates would be extremely cumbersome and would serve no useful purpose. The original tables, however, are open to the inspection of anyone who is interested.

TABLE II  
ILLUSTRATING METHOD OF FINDING TOTAL WAGES AND SALARIES IN EACH STATE RECEIVED BY ALL PERSONS HAVING INCOMES LESS THAN \$2,000 (EXCLUDING FARMERS AND FARM LABORERS)

## New York

	Number of persons in each occupation group	Percentage in each group receiving incomes less than \$2,000 per year	Number of persons receiving less than \$2,000 per year	United States average wages for each group	Ratio of wage rates in this State to wage rates in United States	Average wages in State for each group	Total wages in State
Mining.....	7,644	84.3	6,444	1,300	.933	\$1,213	\$7,816,572
Manufacturing.....	1,755,927	96.4	1,692,714	1,160	1.055	1,224	2,071,881,936
Transportation.....	404,723	88.4	357,775	1,250	1.030	1,288	460,814,200
Trade.....	592,145	64.5	382,526	1,145	1.040	1,191	455,588,466
Public Service.....	100,394	84.3	84,632	.893	1.039	.928	78,588,496
Professional.....	292,211	47.9	139,969	1,200	1.039	1,247	174,541,343
Domestic.....	470,715	93.2	438,706	.900	1.033	.930	407,936,580
Clerical.....	565,944	66.7	377,484	1,200	1.055	1,266	477,894,744
Total.....	4,189,703		3,480,250			\$1,191	\$4,145,072,337 <sup>1</sup>

<sup>1</sup> The total wages must be converted into total income. In Chapter 23, volume II of *Income in the United States*, it was found that the average ratio between wages and income for persons having incomes of less than \$2,000 was 1.1:095. Total income may therefore be found by multiplying \$4,145,072,337 x 1.095 which equals \$4,593,154,600.

As said, to estimate the annual wages of persons in each occupation group, indices were found for each State, and applied to the average annual wages for each occupation group in the whole country. In this way, the different wage levels obtaining in different States, as well as the different occupations of the gainfully employed in different States were given their due weight.

The sources from which the varying income from wages imputed to different States were drawn are as follows:—

- (1) Mining. The Census of Mines and Quarries, 1919, gives the total wages paid and the number of miners paid in each State.
- (2) Manufacturing. The Census of 1919 gives the number employed in manufacturing, and also the total wages paid in each State.
- (3) Transportation. The reports of the Interstate Commerce Commission show the wages paid for similar work in three divisions of the country—Eastern, Southern, and Western. These, together with similar data furnished by the American Telephone and Telegraph Company, have been used as a basis for adjusting wage rates by States. The number of persons employed is estimated from the Census of Occupations, 1920.
- (5) Public Service. This is a small group, for which no systematic wage data exist. The relative wages have been apportioned in general conformity with the other groups. The estimates of numbers employed are based on the Census of Occupations.
- (6) The relative wages and salaries of persons listed under Professional Service in different States have been apportioned according to an index constructed from relative rates of salaried employees in manufacturing and mining. Again, the Census of Occupations gives a basis for estimating the numbers of persons.
- (7) No systematic data exist in the field of Domestic and Personal Service. Owing to this lack, an index based on manufacturing wages was used to determine the relative rates in each State; and the number of persons employed was estimated from the Census of Occupations.
- (8) Clerical. The relative wages of clerks in manufacturing and transportation have been used as an index for computing the rate of wages in different States. The number of persons employed is estimated from the Census of Occupations.

These data make possible a reasonably accurate estimate of the differences in wage levels that exist among the 48 States.

### C. Income of Farm Laborers.

Farm laborers form a problem by themselves. Their wages, as shown in the Year Book of the Department of Agriculture, vary widely from one State to another. The rates used here are average monthly wages without board, and thus furnish material only for an index of variations. The average wage of farm laborers in 1919 was estimated at \$518, and the total wages at \$2,302 million. This total for the entire country was apportioned among the States according to the index of variations made by taking the products of the number of farm laborers in each State times the average monthly wages. These results appear in the summary table.

### D. Income of Farmers.

The distribution of the total income of farmers in 1919 among the various states is the most difficult and complicated of the various subdivisions with which we have to deal. Without an actual census of farmers' incomes, the extraordinary diversity of production and costs presents problems which can only be solved in rough approximations. In addition the reports of the Department of Agriculture contain duplications which may be eliminated only in a broad way. These reports do not differentiate between the crops which are sold as crops and those which are sold or used to feed animals.

While such corrections may be made for the country as a whole with a tolerable degree of accuracy, errors are apt to loom large in the subdivisions by States. Since it has not been possible to divide all the items of product or of expenses among the States, the larger ones only have been chosen and used as an index of the proportions in which the total farmers' income of \$10,850 million was divided. As a matter of fact the total resulting from the use of this index came very near the national total, being \$10,978 million; but the closeness of these figures is largely a matter of chance, for among the products of each State no account has been taken of the direct income received by the farmers, such as milk, butter, vegetables, home rent, etc. In the expenses no account has been taken of seed, horses sold, feed purchased, etc. These items, however, are of relatively minor importance and do not affect the validity of the index to any marked degree. The items comprising the index are by all odds the largest affecting farmers' income. And they are also the items concerning whose distribution by States we have the most accurate information. Most of them are reported in the Census of 1920 and the others, for the most part, rest on Census data.

The method of attack has been to take as a basis for the farmers' income of each State the crops raised. These are definitely recorded for each State, and form, for the country as a whole, about nine-tenths of the value

product of farmers. To the value of these crops must be added the value produced by (1) animals slaughtered and (2) animal products over and above the value of those crops that are fed to animals.<sup>1</sup>

The value added by animals slaughtered has been based on a large number of reports of the costs of producing beef and hogs. These indicate that the ratio of feed costs to other costs is about four to one. On the assumption that total costs are roughly equal to total value, the indication is that about twenty per cent of the value of animals slaughtered is an addition to the value of the crops that have been fed to these animals.

While this rule seems to hold for most of the country, an exception must be made in the range states (Texas, Oklahoma, Montana, Idaho, Colorado, Wyoming, New Mexico, Arizona, Utah, and Nevada) in which the value added by animals above the crops they are fed is estimated at fifty per cent of their total value. This change in ratio is due to the fact that crops (range grass) on which these cattle are largely fed is not counted by the Census in its value of total crops. Of course, the same remark holds true concerning all animals which are out at pasture; but it is "more" true of the range States. That there is a distinct difference between these states and the rest of the country is indicated by the fact that in all other states there are 54,624,057 hogs and 50,822,210 cattle; whereas in the range states there are 4,722,352 hogs and 15,830,349 cattle. In the rest of the country, therefore, hogs and cattle are roughly equal. In the range states there are more than three times as many cattle as hogs. In addition, there is little fattening of cattle in the range States.

Having determined on the proportion of the value of animals slaughtered which may be considered a net addition to the value of crops which they are fed, it remains to determine the value of animals slaughtered. This

<sup>1</sup> Some hypothetical examples will explain this procedure.

(a) If all farmers in state A raised feed worth say, a million dollars; and sold it to farmers in state B, who raised no feed at all, but only fattened cattle, the record might stand

State A produces crops worth .....	\$1,000,000
State B produces cattle of gross value.....	1,250,000
State B produces cattle of net value (20%).....	250,000
Total value of agriculture in both states (A + B).....	1,250,000

The million dollars worth of feed bought by the farmers of State B from those of State A is thus counted out.

(b) If one set of farmers in one state sell feed to another set of farmers of the same state, who raise only cattle, then the record stands

Value of crops raised.....	\$1,000,000
Value of cattle slaughtered.....	1,250,000
Net value of cattle slaughtered.....	250,000
Income of Farmers.....	1,250,000

(c) If all farmers raise crops and feed them to their own animals, then the record stands

Value of crops raised.....	\$1,000,000
Value of animals slaughtered.....	1,250,000
Net value of animals slaughtered.....	250,000
Income of Farmers.....	1,250,000

figure is not included in the Census; but the Bureau of Animal Industry reports the total production of meat; and the average values of the different kinds of animals slaughtered are shown in the Department of Agriculture Year Book for 1920. From these data the total value of animals slaughtered in the United States may be estimated as follows:

TABLE 3  
TOTAL VALUE OF ANIMALS SLAUGHTERED IN 1919<sup>1</sup>

	U. S. inspected	Other	Total number slaughtered	Average value	Total value (thousand dollars)
Cattle.....	10,089,984	3,545,100	13,635,084	\$44.22	\$ 602,943
Calves.....	3,969,019	5,072,000	9,041,019	25.00	226,025
Sheeps and Lambs.....	12,691,117	3,573,700	16,264,817	11.63	189,160
Goats.....	87,380	160,100	247,480	10.00	2,475
Swine.....	41,811,830	24,868,500	66,680,330	22.00	1,466,967
Total.....					\$2,487,570 <sup>2</sup>

Twenty per cent of the value of animals slaughtered, \$2,487,570,000, is \$497,514,000, and when a correction is made for the fifty per cent which is attributed to the value of animals in the range States, this total becomes \$652,952,000. This sum therefore is counted a net addition to the value of the total crops produced. In order to divide this among the various States the total value of beef cattle, sheep, goats, and swine was taken for each State and the \$652,952,000, was divided in accordance with this index. The assumption underlying this division is that the value of animals slaughtered in the States varies in the same ratio as the value of the animals in those States; an assumption which appears to be in general accord with the facts.

The values of animal *products* are reported by States in the Census; but, as in dealing with meat, it is necessary to determine what proportion of this value may be considered a net addition to the crops that are used to produce it. On this point the evidence is less clear than in the case of meat production. A study of the cost reports of the Bureau of Farm Management indicates that about sixty per cent of the costs may be attributed to feed and about forty per cent to other items. This proportion is broadly corroborated by Mr. H. A. Wallace, Editor of Wallace's Magazine and by Mr. F. A. Peck, formerly of the Bureau of Crop Estimates and now with

<sup>1</sup> Supplied through the courtesy of the Bureau of Animal Industry.

<sup>2</sup> The total value of animals sold and slaughtered on farms is given in an advance bulletin of the Census at \$3,511,201.21. This figure, however, contains considerable duplication, since many animals are sold twice; it is only in the range States that there is little re-selling and in these States the values reported by the Census agree fairly closely with those used.

the University of Minnesota. If we accept forty per cent as the net addition and apply it to the total value of animal products of \$2,667,072,273,<sup>1</sup> then the net addition is found to be \$1,067,000,000. Since the total value of animal products is reported by States, the amount to be added on this account can be computed directly.

A broad check upon the total value added by "Animals Slaughtered" and "Animal Products" may be had by comparing the results obtained by the preceding method on the one hand and the net value as found by subtracting the crops fed to animals from the total value product of those animals on the other hand. These crops are mainly hay, corn, barley and oats, and the percentage of each of these crops sold is reported in the Census. From the total amounts fed must further be subtracted for our present purposes the value of crops fed to horses and mules on the farms. The amounts fed to horses and mules are estimated at two thirds the Army ration—12 lbs. oats and 14 lbs. hay for horses, and 9 lbs. oats and 14 lbs. hay for mules.

This comparison works out as follows:

(1) Value added by animals slaughtered.....	\$ 652,952,000
Value added by animal products.....	<u>1,066,828,909</u>
Total value added.....	\$1,719,780,909
(2) Total value of animals slaughtered and animal products.....	\$5,154,643,044
Less value of crops fed to live stock (total value of crops fed.....	\$5,698,995,210
less value fed to horses.....	<u>2,069,597,962</u>
	\$3,629,397,248
	<u>\$1,525,245,796</u>

The two methods of estimating the value product added by animals and animal products over and above the crops fed to animals differ by about 11 per cent—not a wide difference as such matters go—and indicate that the percentages used in estimating the net addition to animals slaughtered and animal products are tolerably reliable.

<sup>1</sup> Summary of the Census of Agriculture, 1919 and 1920. Table 26, page 15.

TABLE 4  
DISTRIBUTION OF FARMERS' INCOME BY STATES  
1919

Income	NEW ENGLAND DIVISION					MIDDLE ATLANTIC DIVISION			
	Maine	N. H.	Vt.	Mass.	R. I.	Conn.	N. Y.	N. J.	Pa.
(A) Value of crops.....	100,152	23,509	48,000	53,701	5,340	44,492	417,047	87,464	410,934
Value of animal products <sup>1</sup> .....	26,075	14,681	31,573	33,851	5,368	20,862	225,466	31,483	156,012
(B) Net value added by animal products (40% of above) .....	10,430	5,872	12,629	13,540	2,147	8,345	90,186	12,593	62,405
Value of beef cattle, hogs, sheep and goats <sup>2</sup> .....	21,405	12,544	30,636	22,693	3,354	15,996	218,248	21,103	150,391
(C) Value added by animals slaughtered.....	2,109	1,236	3,017	2,236	331	1,577	21,507	2,079	14,820
Total Income (A + B + C) .....	112,691	30,617	63,646	69,477	7,818	54,414	528,740	102,136	488,159
<i>Expenses</i>									
Number of draft animals.....	94,794	38,442	77,832	50,937	6,615	38,994	543,494	78,326	561,047
Per cent of all draft animals in State.....	.00376	.00153	.00309	.00202	.00026	.00155	.02456	.00311	.02226
Expenses of feed.....	7,783	3,167	6,396	4,181	538	3,209	44,629	6,438	46,078
Fertilizer.....	7,759	526	857	3,907	380	4,894	15,067	10,743	15,623
Labor.....	9,641	4,521	7,712	16,577	2,102	13,203	64,325	18,074	42,112
Interest on mortgage.....	1,134	348	1,273	1,384	87	1,018	7,859	1,357	4,650
Maintenance.....	11,633	5,207	9,741	13,929	1,429	10,233	80,159	13,360	76,442
Total Expenses.....	37,950	13,769	25,979	39,928	4,536	32,557	212,039	49,972	184,910
Total recorded income minus total recorded expenses.....	74,741	16,848	37,667	29,549	3,292	21,857	316,701	52,164	303,249
Final income (10850 of above) <sup>3</sup> .....	73,867	16,651	37,226	29,263	3,253	21,601	312,996	51,554	299,701
Number of farms.....	48,227	20,523	29,075	32,001	4,083	22,655	193,195	29,702	202,252
Average income per farm.....	1,532	811	1,280	913	797	81.2	1,807	1,736	1,482
Average acreage per farm.....	112.5	126.9	145.7	77.9	83.8	83.8	106.8	76.8	87.3
Average value per farm.....	5,609	5,732	7,661	9,389	8,238	10,019	9,879	10,499	8,551

<sup>1</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 53. <sup>2</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 41.

<sup>3</sup> Explained in text.

TABLE 4—Continued

EAST NORTH CENTRAL DIVISION (Thousands of dollars)					
Income	Ohio	Ind.	Ill.	Mich.	Wis.
(A) Value of crops.....	607,038	497,230	864,738	404,014	445,348
Value of animal products <sup>1</sup> .....	155,588	99,350	142,351	111,076	213,022
(B) Net value added by animal products (40% of above).....	62,235	39,740	56,940	44,430	85,209
Value of beef cattle, hogs, sheep and goats <sup>2</sup> .....	186,111	165,291	280,456	135,039	243,941
Value added by animals slaughtered.....	18,340	16,289	27,637	13,307	24,040
Total Income (A + B + C).....	687,613	553,259	949,315	461,751	554,597
<i>Expenses</i>					
Number of draft animals.....	842,318	817,591	1,465,126	611,393	687,648
Per cent of all draft animals in State.....	.03343	.03244	.05814	.02426	.02729
Expenses of feed.....	69,200	67,151	120,350	50,218	56,490
Fertilizer.....	13,206	8,735	2,996	4,873	780
Labor.....	46,428	32,867	80,390	32,168	48,137
Interest on mortgage.....	7,146	6,105	10,847	8,646	18,792
Maintenance.....	79,290	57,848	97,032	59,989	73,606
Total expenses.....	215,270	172,706	311,615	155,894	197,805
Total recorded income minus total recorded expenses.....	472,343	380,553	637,700	305,857	356,792
Final income (10978 of above).....	466,817	376,101	630,239	302,278	352,618
Number of farms.....	256,695	205,126	237,181	196,447	189,295
Average income per farm.....	1,819	1,834	2,657	1,539	1,863
Average acreage per farm.....	91.6	102.7	134.8	96.9	117.0
Average value per farm.....	12,060	14,831	28,108	8,976	14,143

<sup>1</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 53.<sup>2</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 41.

TABLE 4—Continued

WEST NORTH CENTRAL DIVISION (Thousands of dollars)						
Income	Minn.	Iowa	Mo.	N. Dak.	S. Dak.	Kans.
(A) Value of crops.....	506,020	890,391	559,048	301,783	311,007	519,730
Value of animal products <sup>1</sup> .....	113,237	130,250	105,601	30,980	35,739	54,612
(B) Net value added by animal products (40% of above).....	45,295	52,100	42,240	12,392	14,296	21,845
Value of beef cattle, hogs, sheep and goats <sup>2</sup> .....						
(C) Value added by animals slaughtered.....	209,256	447,885	236,846	80,378	173,622	241,695
Total Income (A + B + C).....	20,621	44,140	23,340	7,922	17,110	23,820
	571,936	986,631	624,628	322,097	342,413	565,395
<i>Expenses</i>						
Number of draft animals.....	943,032	1,468,042	1,295,265	863,555	832,151	1,061,243
Per cent of all draft animals in State.....	637,42	.05826	.05139	.03427	.03302	.04211
Expenses of feed.....	77,459	120,598	106,377	70,939	68,351	87,108
Fertilizer.....	4,433	596	3,941	120	34	66
Labor.....	49,811	70,698	40,156	37,064	32,599	46,366
Interest on mortgage.....	13,996	26,940	13,204	7,255	5,303	9,638
Maintenance.....	73,193	123,192	60,704	32,339	35,387	53,499
Total expenses.....	214,892	342,024	224,381	147,717	141,674	196,736
Total recorded income minus total re- corded expenses.....	357,044	644,607	400,247	174,380	200,739	368,659
Final income ( $\frac{10850}{10978}$ of above).....	353,705	637,065	395,564	172,340	198,390	364,346
Number of farms.....	178,478	213,439	263,004	77,690	74,655	124,421
Average income per farm.....	1,982	2,985	1,504	2,218	2,657	2,928
Average acreage per farm.....	169.3	156.8	132.2	466.1	464.1	339.4
Average value per farm.....	21,221	39,941	13,654	22,651	37,835	33,771

<sup>1</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 53.<sup>2</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 41.

165,286

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19,982

## THE METHOD

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TABLE 4—Continued

South Atlantic Division (Thousands of dollars)									
Income	Del.	Md.	D. C.	Va.	W. Va.	N. C.	S. C.	Ga.	Fla.
(A) Value of crops.....	23,059	109,811	307	292,842	96,537	503,229	437,122	540,614	80,257
Value of animal products <sup>1</sup> .....	5,779	25,522	119	46,311	26,333	35,860	20,354	36,401	7,622
(B) Net value added by animal products (40% of above).....	2,312	10,209	48	18,524	10,533	14,344	8,142	14,560	3,049
Value of beef cattle, hogs, sheep and goats <sup>2</sup> .....	4,036	25,802	189	66,187	42,884	45,661	31,101	56,330	20,965
(C) Value added by animals slaughtered.....	398	2,542	19	6,522	4,226	4,500	3,065	5,552	2,066
Total Income (A + B + C).....	25,769	122,562	374	317,888	111,296	522,073	448,329	560,726	85,372
<i>Expenses</i>									
Number of draft animals.....	37,191	173,962	343	409,295	184,129	428,005	297,681	506,854	80,616
Per cent of all draft animals in State.....	.00148	.00690	.000014	.01624	.00731	.01698	.01181	.02011	.00320
Expenses of feed.....	3,064	14,283	20	33,617	15,132	35,149	24,447	41,628	6,624
Fertilizer.....	1,222	7,610	23	17,278	1,709	48,797	52,547	46,196	10,317
Labor.....	2,808	16,721	173	21,809	5,816	12,036	15,336	19,017	10,830
Interest on mortgage.....	254	1,539	5	2,462	661	1,918	1,836	2,750	942
Maintenance.....	153	15,566	153	31,823	12,187	27,320	21,439	30,420	6,658
Total expenses.....	7,501	55,719	374	106,989	35,505	125,220	115,605	140,011	35,371
Total recorded income minus total recorded expenses.....	18,268	66,843		210,899	75,791	396,853	333,724	420,715	50,001
Final income (10978 of above).....	18,054	66,061		208,431	74,904	392,210	329,819	415,793	49,416
Number of farms.....	10,140	47,908		186,242	87,289	269,763	192,673	310,732	54,005
Average income per farm.....	1,780	1,379	27.8	1,119	858	1,454	1,712	1,338	915
Average acreage per farm.....	93.1	99.3	29,059	99.7	109.6	74.2	64.5	81.9	112.0
Average value per farm.....	7,903	9,678		6,425	5,687	4,634	4,946	4,366	6,116

<sup>1</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 53.<sup>2</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 41.

TABLE 4—Continued

Income	EAST SOUTH CENTRAL DIVISION			WEST SOUTH CENTRAL DIVISION		
	Ky.	Tenn.	Ala.	Miss.	Ark.	Ia.
(A) Value of crops.....	348,655	318,285	304,349	336,207	341,565	206,183
Value of animal products <sup>1</sup> .....	50,928	50,961	30,427	27,328	30,084	49,888
(B) Net value added by animal products (40% of above).....	20,371	20,384	12,171	10,931	12,034	5,445
Value of beef cattle, hogs, sheep and goats <sup>2</sup> .....	75,793	75,116	48,154	55,823	49,121	35,064
(C) Value added by animals slaughtered.....	7,469	7,402	4,745	5,501	4,840	3,455
Total Income (A + B + C).....	376,495	346,071	321,265	352,639	358,439	215,083
<i>Expenses</i>						
Number of draft animals.....	675,299	670,431	426,600	523,068	574,603	358,871
Per cent of all draft animals in State.....	.02680	.02660	.01693	.02076	.02280	.01424
Expenses of feed.....	55,476	55,062	35,045	42,973	47,196	29,477
Fertilizer.....	3,597	3,525	14,066	4,288	2,573	3,840
Labor.....	18,152	11,227	7,724	7,033	13,208	21,418
Interest on mortgage.....	4,027	3,090	2,183	1,953	3,066	1,475
Maintenance.....	30,276	27,066	16,226	18,794	18,877	12,314
Total expenses.....	111,528	99,970	75,244	75,041	84,920	68,524
Total recorded income minus total re- corded expenses.....	264,967	246,101	246,021	277,598	273,519	146,559
Final income (10978 of above).....	261,867	243,222	243,143	274,350	270,319	144,844
Number of farms.....	270,626	252,774	256,099	272,101	232,604	135,463
Average income per farm.....	968	962	949	1,008	1,162	1,069
Average acreage per farm.....	79.9	77.2	76.4	66.9	75.0	74.0
Average value per farm.....	5,587	4,953	2,698	3,546	3,974	4,354

<sup>1</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 53.<sup>2</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 41.<sup>3</sup> Value added by animals has been adjusted as explained in the text.

## THE METHOD

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TABLE 4—Continued

Income	Mont.	Idaho	Wyo.	MOUNTAIN Division (Thousands of dollars)			
				Colo.	N. Mex.	Ariz.	Utah
(A) Value of crops.....	69,975	126,492	30,271	181,065	40,620	42,481	58,067
Value of animal products <sup>1</sup> .....	24,809	22,225	14,004	26,921	8,448	6,295	13,736
(B) Net value added by animal products (40% of above).....	9,924	8,890	5,602	10,768	3,379	2,518	5,494
Value of beef cattle, hogs, sheep and goats <sup>2</sup> .....	102,615	69,214	75,447	122,252	81,069	44,327	43,114
Value added by animals slaughtered.....	25,282 <sup>3</sup>	17,050 <sup>3</sup>	18,588 <sup>3</sup>	30,120 <sup>3</sup>	19,975 <sup>3</sup>	10,920 <sup>3</sup>	10,620 <sup>3</sup>
Total income (A + B + C).....	105,181	152,432	54,461	221,953	63,974	55,919	74,181
Expenses							
Number of draft animals.....	678,185	300,858	201,710	451,829	203,055	148,159	128,264
Per cent of all draft animals in State.....	.02691	.01194	.00804	.01793	.00806	.00588	.00509
Expenses of feed.....	55,704	24,716	16,643	37,115	16,684	12,172	10,536
Fertilizer.....	126	106	8	294	113	41	109
Labor.....	21,344	18,303	9,277	28,293	6,438	8,442	8,490
Interest on mortgage.....	5,924	5,100	1,178	4,258	815	1,174	1,728
Maintenance.....	14,086	10,806	3,558	15,210	3,522	2,459	4,627
Total expenses.....	97,184	59,031	30,664	85,170	27,572	24,288	25,490
Total recorded income minus total recorded expenses.....	7,997	93,401	23,797	136,783	36,402	31,631	48,691
Final income ( $\frac{1}{7}$ of 978 of above).....	7,901	92,280	23,511	135,142	35,965	31,251	48,107
Number of farms.....	57,677	42,106	15,748	59,934	29,844	9,975	25,662
Average income per farm.....	137	2,192	1,493	2,255	1,205	3,133	1,875
Average acreage per farm.....	608.1	198.9	749.9	408.1	817.9	581.7	196.8
Average value per farm.....	17,095	17,008	21,235	17,966	10,896	23,418	12,130

<sup>1</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 53.<sup>2</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 41.<sup>3</sup> Value added by animals slaughtered has been adjusted as explained in the text.

TABLE 4—Continued

Pacific Division (Thousands of dollars)				Total United States
Income	Wash.	Oregon	Calif.	
(A) Value of crops.....	227,212	131,885	587,601	14,755,356
Value of animal products <sup>1</sup> .....	44,066	35,147	103,932	
(B) Net value added by animal products (40% of above).....	17,626	14,059	41,573	1,066,826
Value of beef cattle, hogs, sheep and goats <sup>2</sup> .....	49,437	71,492	161,569	5,053,519
Value added by animals slaughtered.....	4,872	7,636	15,922	652,952
Total income (A + B + C).....	249,710	153,580	645,096	16,475,134
<i>Expenses</i>				
Number of draft animals.....	319,472	285,934	465,826	
Per cent of all draft animals in State.....	.01268	.01135	.01849	
Expenses of feed.....	26,248	23,495	38,274	2,070,021
Fertilizer.....	526	490	8,183	326,396
Labor.....	34,121	21,031	126,096	1,363,492
Interest on mortgage.....	4,034	3,380	239,872	
Maintenance.....	17,746	13,054	42,683	1,497,331
Total expenses.....	82,675	61,450	230,024	5,497,112
Total recorded income minus total recorded expenses.....	167,035	92,130	415,072	10,978,022
Final income (10850 10978 of above).....	165,031	91,024	410,091	10,851,096
Number of farms.....	66,288	50,206	117,670	6,448,343
Average income per farm.....	2,490	1,813	3,485	1,682
Average acreage per farm.....	199.8	269.7	249.6	148.2
Average value per farm.....	15,952	16,304	29,158	12,084

<sup>1</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 53.<sup>2</sup> Advance Bulletin of the 1920 Census of Agriculture, p. 41.

One other remark should be made concerning the variations among States in farming. Differences in crops and their values are taken account of in the Census figures; the same is true of variations in the amount spent on fertilizer, labor, interest on mortgage, and animal products. Crops sold by farmers to other farmers and used as feed by them, are taken account of first by using the entire crop values for each State; and second by adding to their value only that part of the value of animals slaughtered on the farm or sold for slaughter, and of animal products which is imputed to other expenses than the value of feed. There are, however, variations in the feed of animals, especially the proportion that is due to grazing, which are not taken account of in the Census figures. Such variations cause some error; corrected in a very rough manner for the range States alone. But the error cannot be large; for crops constitute about 90 per cent of the total value product according to this method of counting; so that the error must be in the remaining 10 per cent only.

The amounts shown, then, are not put forward as exact; they are, rather, working estimates, which appear to be substantiated fairly well by the cross checks which have been used.<sup>1</sup>

#### E. Corporate Surplus.

The corporate surplus in 1919, which amounted to 2.0 billion (*Income in the United States*, volume II, chapter 25) is a difficult item to distribute among the States. Perhaps the best approximation is to credit it in the same ratio as the value added by manufactures in each State, an item which is reported in the Census of Manufactures for 1919.<sup>2</sup> A comparison with earlier Censuses shows that this percentage distribution remains fairly constant from one census period to the next, so that there can be no great error in applying these figures to the total corporate surplus.

<sup>1</sup> The low average income per farm in Montana (\$137) may not be typical. Montana crops in 1919 were particularly bad; the composite number of all crop yields in 1919 as shown in the Department of Agriculture Year Book, 1920, p. 810, was 40, as compared to 83 in 1920, 66 in 1917, 86 in 1916, 107 in 1915, and 90 in 1914. The "hypothetical" value of all crops in Montana, as estimated by the Department of Agriculture (page 807), in 1919 is \$71,552,000 as against \$146,713,000 in 1918 and a five year average, 1914 to 1918, of \$95,158,000. If the value of crops raised had been what one would have expected in a "normal" year, then the average income per farmer would have been about \$1,200 to \$1,500 (instead of \$137) a figure that is not out of line with the averages of surrounding states.

<sup>2</sup> Various other ratios of distribution have been suggested—(1) the distribution of the non-agricultural income of each State; (2) the distribution of dividends received as reported by the Bureau of Internal Revenue in *Statistics of Income*. Both of these methods are logical, especially the latter. It is questioned, however, whether corporate surplus really goes to stockholders in the sense indicated. To some extent, it goes to the community. As a practical matter, the distribution resulting from the use of any one of these ratios is about the same.

**F. The Totals.**

The preceding items need to be cast up to get the total income for each State. While the figures for persons having incomes over and under \$2,000 exclude the farmers, and are therefore rather artificial, they possess a certain independent interest. Of course this form of presentation is necessary because the Federal Income Tax data give arbitrary prominence to the \$2,000 line.

TABLE 6  
SUMMARY TABLE OF DISTRIBUTION OF INCOME BY STATES  
1919

State	Income of non-agricultural persons having over \$2,000	Income of non-agricultural persons having under \$2,000	Farm laborers	Farmers	Corporate surplus	Total	Total excluding farmers and farm laborers
	New England Division						
Maine.....	\$ 103,620	\$ 235,743	\$ 18,676	\$ 73,867	\$ 16,200	\$ 448,106	\$ 355,563
New Hampshire.....	73,857	154,210	6,412	16,651	13,400	264,530	241,467
Vermont.....	43,010	91,473	8,970	37,226	5,800	186,479	140,283
Massachusetts.....	1,139,071	1,708,763	16,983	29,203	140,000	3,034,020	2,987,834
Rhode Island.....	145,414	257,035	2,686	3,253	26,600	434,988	420,049
Connecticut.....	323,710	578,679	9,798	21,601	56,600	990,388	958,989
Middle Atlantic Division							
New York.....	3,727,257	4,598,156	127,650	312,996	313,800	9,074,859	8,634,213
New Jersey.....	836,951	1,372,091	19,108	51,554	112,400	2,392,104	2,321,442
Pennsylvania.....	1,759,009	3,606,398	44,510	299,701	248,400	5,958,018	5,613,807
East North Central Division							
Ohio.....	1,017,732	2,254,396	53,768	466,817	175,000	3,967,713	3,447,128
Indiana.....	369,802	855,401	43,672	376,101	57,800	1,702,776	1,283,003
Illinois.....	1,629,637	2,472,084	76,424	630,239	154,000	4,962,384	4,255,721
Michigan.....	652,278	1,451,663	51,888	302,278	123,800	2,581,907	2,227,741
Wisconsin.....	282,742	697,952	75,541	352,618	57,660	1,466,513	1,038,354
West North Central Division							
Minnesota.....	328,819	588,180	89,010	353,705	26,800	1,386,514	943,799
Iowa.....	444,917	520,423	76,996	637,065	18,000	1,697,401	983,340
Missouri.....	443,842	87,070	62,752	395,564	43,200	1,822,428	1,364,112
North Dakota.....	48,973	82,878	27,725	172,340	1,000	332,916	132,851
South Dakota.....	104,501	97,760	34,003	198,390	1,600	436,254	203,861
Nebraska.....	214,939	276,154	44,919	364,346	9,200	909,558	500,293
Kansas.....	212,716	399,341	40,977	399,505	12,800	1,065,339	624,857

TABLE 5—Continued

State	Income of non-agricultural persons having over \$2,000	Income of non-agricultural persons having under \$2,000	Farm laborers	Farmers	Corporate surplus	Total	Total excluding farmers and farm laborers
<i>South Atlantic Division</i>							
Delaware.....	\$ 62,603	\$ 85,817	\$ 3,717	\$ 18,054	\$ 6,400	\$ 176,591	\$ 154,820
Maryland.....	387,907	498,123	21,638	66,061	25,800	999,529	911,830
District of Columbia.....	148,414	235,515			3,000	386,929	386,929
Virginia.....	227,718	484,134	48,024	208,431	21,800	990,107	733,652
West Virginia.....	143,114	398,742	22,963	74,904	16,000	655,723	557,856
North Carolina.....	139,499	329,375	86,112	392,210	33,400	980,596	502,274
South Carolina.....	120,488	102,293	80,598	329,819	12,200	735,398	324,981
Georgia.....	193,917	405,275	106,968	415,793	20,000	1,141,953	619,192
Florida.....	105,133	213,348	28,980	49,416	9,600	400,477	328,081
<i>East South Central Division</i>							
Kentucky.....	207,552	412,537	52,054	261,867	12,600	946,610	632,689
Tennessee.....	186,149	351,526	55,970	243,222	17,000	853,867	554,675
Alabama.....	119,120	349,647	83,116	243,143	15,200	810,226	483,967
Mississippi.....	90,663	174,252	81,806	274,350	8,000	629,071	272,915
<i>West South Central Division</i>							
Arkansas.....	112,229	199,762	73,832	270,319	7,600	663,742	319,591
Louisiana.....	196,930	349,946	60,294	144,844	19,400	771,414	566,276
Oklahoma.....	195,776	384,894	68,573	427,608	7,000	1,083,851	587,670
Texas.....	543,945	876,191	181,792	885,122	24,000	2,511,050	1,444,136
<i>Mountain Division</i>							
Montana.....	93,338	154,181	22,110	7,901	3,600	281,130	251,119
Idaho.....	50,751	87,630	27,004	92,280	3,000	260,665	141,381
Wyoming.....	46,592	72,074	7,920	23,511	3,200	153,297	121,866
Colorado.....	169,275	258,258	29,808	135,142	8,000	600,483	435,533
New Mexico.....	28,564	68,163	13,615	35,965	800	147,107	97,527
Arizona.....	52,203	116,280	19,854	31,251	2,200	221,788	170,683
Utah.....	53,789	111,393	15,235	48,107	3,800	232,324	168,982
Nevada.....	14,430	36,023	4,278	10,610	400	65,791	50,903
<i>Pacific Division</i>							
Washington.....	264,490	552,740	54,412	165,031	29,400	1,066,073	846,630
Oregon.....	152,117	267,064	33,617	91,024	12,800	556,622	431,981
California.....	893,062	1,316,233	129,206	410,091	60,400	2,808,992	2,269,695
Total U. S. ....	\$18,902,615	\$32,152,266		\$2,345,964	\$2,000,600	\$66,252,601	\$53,055,541

### III. THE RESULTS

1. New York State with an income of about nine billion dollars, which is over one-eighth of the total National Income, has by far the largest income of any State. It is followed in succession by Pennsylvania, Illinois, Ohio, Massachusetts, California, Michigan, and Texas. At the other end of the list is Nevada, with an income of less than one hundred million dollars.

2. The Middle Atlantic States (New York, New Jersey and Pennsylvania), taken as a group, have over one-fourth of the National Income; and with the East North Central group and the New England States, have more than one-half of the total.

3. New York again heads the list of per capita incomes, with \$874. Nevada, California, Delaware, Wyoming, Massachusetts, and Washington are next with around \$800. At the other end of the scale, with per capita incomes of less than \$400 each are Georgia, Kentucky, North Carolina, Arkansas, Tennessee, Mississippi, and Alabama.

4. Taken as a group, the Pacific States have the largest per capita income, with \$796; next are the Middle Atlantic States, with \$783. The per capita income of the East South Central States was less than half these amounts, or \$364.

5. The average income of the gainfully employed shows variations from the per capita income due to the wide differences in the character of the employment of the population in the various States. South Dakota and New York head the list with just over \$2,000; and close to this mark are Nebraska, Iowa, Delaware, Illinois, and Wyoming. At the other end of the list are Alabama and Mississippi, both just under \$900.

6. The Middle Atlantic States have the largest average income of gainfully employed with \$1,886 and the Pacific States have \$1,837. At the other end, the East South Central States have the smallest with \$979.

7. The per cent of non-agricultural Income in each State received by persons having incomes over \$2,000 per year is difficult to interpret. The percentage is high where there are large incomes; but it may also be high owing to a large number of moderate incomes. If we had sufficient data to plot a curve representing the distribution of incomes in each state, such variations might be brought out, but this is not feasible with the existing data. South Dakota shows the highest percentage, having over one-half of its non-agricultural income received by persons with incomes over \$2,000; next in order are Iowa, New York, Nebraska, Maryland, and Delaware. At the other end of the scale are North Carolina, Wisconsin, West Virginia, and Alabama, which show about one-fourth of their non-agricultural incomes received by persons having over \$2,000 per annum.

8. Texas has the largest farmers' income, with nearly 900 million dol-

lars. Iowa and Illinois come next, each just above 600 million dollars. Rhode Island farmers are last, with aggregate incomes of three million dollars.

9. The largest average income of farmers is found in California, with \$3,485; next in Nevada, with \$3,354. The only other States near the \$3,000 mark are Arizona, Iowa, and Nebraska. With the exception of Montana, which had an abnormally poor year in 1919, the States having the lowest averages (all less than \$1,000) were Kentucky Tennessee, Connecticut, Alabama, Florida, Massachusetts, West Virginia, New Hampshire, and Rhode Island.

10. Taken as a group, the East North Central and the West North Central States have nearly one-half of the farmers' income of the country. The Middle Atlantic States have only 6 per cent, and New England less than two per cent.

11. Farmers' income constitutes over one-half the total State income in North Dakota. It is over 40 per cent in South Dakota, South Carolina, Mississippi, Arkansas, Nebraska, and North Carolina. On the other hand, it is less than four per cent in New York, New Jersey, and Connecticut, and less than one per cent in Massachusetts and Rhode Island.

12. Taken as a group, farmers' incomes constitute about one-third of the total income in the West South Central, the West North Central, and the East South Central States. On the other hand, they constitute about one-thirtieth of the total income in New England and the Middle Atlantic States.

TABLE 6  
ANALYSIS OF INCOME BY STATES, 1919

State	Total income (thousands)	Population Jan. 1, 1920	Per capita income	Per cent of total national income in the State	Per cent of total population in the State	Number of persons gainfully employed Jan. 1, 1920	Per cent of State income exclusive of farmer's and farm laborers income received by non-agricultural persons having over \$2,000 per year	
							Average income per person gainfully employed	\$1,592
UNITED STATES.....	\$66,252,601	105,710,620	\$627	100.00	100.00	41,609,192	35.63	
NEW ENGLAND								
Maine.....	448,106	768,014	583	.68	.73	309,858	1,446	29.14
Massachusetts.....	264,530	443,083	597	.40	.42	192,827	1,372	30.59
Vermont.....	186,479	352,428	529	.28	.33	138,484	1,347	30.66
Rhode Island.....	3,034,020	3,852,356	788	4.58	3.64	1,728,297	1,755	38.12
Connecticut.....	434,988	604,387	720	.66	.57	275,000	1,582	33.89
MIDDLE ATLANTIC								
New York.....	9,074,859	10,385,227	874	13.70	9.83	4,504,791	2,014	43.17
New Jersey.....	2,392,104	3,155,900	758	3.61	2.99	1,310,379	1,826	36.05
Pennsylvania.....	5,958,018	8,720,017	683	8.99	8.25	3,426,361	1,739	31.33
EAST NORTH CENTRAL								
Ohio.....	3,967,713	5,759,394	689	5.99	5.45	2,300,412	1,725	29.52
Indiana.....	1,702,776	2,930,390	581	2.57	2.77	1,117,032	1,524	28.82
Illinois.....	4,962,384	6,485,280	765	7.49	6.14	2,626,547	1,889	38.29
Michigan.....	2,581,907	3,668,412	704	3.90	3.47	1,473,614	1,752	29.28
Wisconsin.....	1,466,513	2,632,067	557	2.22	2.49	995,401	1,473	27.23
WEST NORTH CENTRAL								
Minnesota.....	1,386,514	2,387,125	581	2.09	2.26	906,623	1,529	34.84
Iowa.....	1,697,401	2,404,021	706	2.56	2.27	858,699	1,977	45.25
Missouri.....	1,822,428	3,404,055	535	2.75	3.22	1,317,010	1,384	32.54
North Dakota.....	332,916	646,872	515	.50	.61	207,082	1,608	36.86
South Dakota.....	436,254	636,547	685	.66	.60	216,573	2,014	51.26
Nebraska.....	909,558	1,296,372	702	1.37	1.23	457,081	1,990	42.96
Kansas.....	1,065,339	1,769,257	602	1.61	1.67	624,391	1,706	34.04

TABLE 6—Continued

	Total income (thousands)	Population Jan. 1, 1920	Per capita income	Per cent of total national income in the State	Per cent of total population in the State	Number of persons gainfully employed Jan. 1, 1920	Average income per person gainfully employed	Per cent of State income exclusive of farmer's and farm laborer's income received by non-agricultural persons having over \$2,000 per year
<b>SOUTH ATLANTIC</b>								
Delaware.....	\$ 176,591	223,003	\$792	.27	.21	91,224	\$1,936	40.44
Maryland.....	1,449,661	689	1.51	1.37	1.656	603,473	1,639	42.54
District of Columbia.....	437,571	884	.58	.41	.41	236,027	1,639	38.36
Virginia.....	990,107	429	1.49	2.18	1.188	833,177	1,188	31.04
West Virginia.....	655,723	448	.99	1.39	1.39	491,117	1,335	25.65
North Carolina.....	980,596	2,559,123	383	1.48	2.42	895,852	1,095	27.77
South Carolina.....	725,398	1,683,724	437	1.11	1.59	674,257	1,091	37.08
Georgia.....	1,141,953	2,895,832	394	1.72	2.74	1,128,742	1,012	31.32
Florida.....	406,477	968,476	420	.61	.92	385,313	1,055	32.04
<b>EAST SOUTH CENTRAL</b>								
Kentucky.....	946,610	2,416,630	392	1.43	2.29	851,122	1,112	32.80
Tennessee.....	853,867	2,337,885	365	1.29	2.21	829,875	1,029	33.56
Alabama.....	810,226	2,348,174	345	1.22	2.22	908,216	.892	24.61
Mississippi.....	629,071	1,790,618	351	.95	1.69	721,412	872	33.22
<b>WEST SOUTH CENTRAL</b>								
Arkansas.....	663,742	1,752,204	379	1.00	1.66	634,564	1,046	35.12
Louisiana.....	771,414	1,798,509	429	1.17	1.70	681,237	1,132	34.78
Oklahoma.....	1,083,851	2,028,283	534	1.64	1.92	681,439	1,591	33.31
Texas.....	2,511,050	4,663,228	538	3.79	4.41	1,718,945	1,461	37.67
<b>Mountain</b>								
Montana.....	281,130	548,889	512	.42	.52	214,183	1,313	37.17
Idaho.....	260,665	431,866	604	.39	.41	153,459	1,699	35.90
Wyoming.....	153,297	194,402	789	.23	.18	81,536	1,880	38.23
Colorado.....	600,483	939,629	639	.91	.89	366,458	1,639	38.87
New Mexico.....	147,107	360,350	408	.22	.34	122,031	1,205	29.29
Arizona.....	221,788	334,162	664	.33	.32	130,579	1,698	30.58
Utah.....	232,324	449,396	517	.35	.43	149,201	1,557	31.83
Nevada.....	65,791	77,407	850	.10	.07	37,548	1,752	28.45
<b>Pacific</b>								
Washington.....	1,066,073	1,356,621	786	1.61	1.28	578,470	1,843	31.24
Oregon.....	556,622	783,389	711	.84	.74	322,137	1,728	35.21
California.....	2,808,992	3,426,861	820	4.24	3.24	1,511,320	1,859	39.35

TABLE 7  
ANALYSIS OF INCOME OF FARMERS BY STATES, 1919

State	Total income of farmers (thousands)	Average income per farmer	Per cent of total state income going to farmers	Per cent of total farmers' income in the State
UNITED STATES.....	\$10,851,096	\$1,682	16.38	100.00
NEW ENGLAND				
Maine.....	48,227	73.867	1.532	.68
New Hampshire.....	20,523	16.651	.811	.15
Vermont.....	29,075	37.226	1,280	.34
Massachusetts.....	32,001	29.203	.913	.27
Rhode Island.....	4,083	3.253	.797	.03
Connecticut.....	22,655	21.601	.953	.20
MIDDLE ATLANTIC				
New York.....	193,195	312.996	1,807	3.45
New Jersey.....	29,702	51.554	1,736	2.16
Pennsylvania.....	202,252	299,701	1,482	5.03
EAST NORTH CENTRAL				
Ohio.....	256,695	466.817	1,819	11.77
Indiana.....	205,126	376,101	1,834	22.09
Illinois.....	237,181	630,239	2,657	12.70
Michigan.....	196,447	302,278	1,539	11.71
Wisconsin.....	189,295	352,618	1,863	24.04
WEST NORTH CENTRAL				
Minnesota.....	178,478	353,705	1,982	25.51
Iowa.....	213,439	637,065	2,985	37.53
Missouri.....	263,004	395,564	1,504	21.71
North Dakota.....	77,690	172,340	2,218	51.77
South Dakota.....	74,655	198,390	2,657	45.48
Nebraska.....	124,421	364,346	2,928	40.06
Kansas.....	165,286	399,505	2,417	37.50

## THE DISTRIBUTION OF INCOME BY STATES

TABLE 7—Continued

State	Number of farms	Total income of farmers (thousands)	Average income per farmer	Per cent of total state income going to farmers	Per cent of total farmers' income in the State
SOUTH ATLANTIC					
Delaware.....	10,140	\$ 18,054	\$1,780	10.22	.17
Maryland.....	47,908	66,061	1,379	6.61	.61
District of Columbia.....	204	208,431	1,119	21.05	1.92
Virginia.....	186,242	74,904	858	11.42	.69
West Virginia.....	87,289	392,210	1,454	40.00	3.61
North Carolina.....	269,763	329,819	1,712	44.85	3.04
South Carolina.....	192,693	415,793	1,338	36.41	3.83
Georgia.....	310,732	49,416	915	12.16	.46
Florida.....	54,905				
EAST SOUTH CENTRAL					
Kentucky.....	270,626	261,867	968	27.66	2.41
Tennessee.....	252,774	243,222	962	28.48	2.24
Alabama.....	256,099	243,143	949	30.01	2.24
Mississippi.....	272,101	274,350	1,008	43.61	2.53
WEST SOUTH CENTRAL					
Arkansas.....	232,604	270,319	1,162	40.73	2.49
Louisiana.....	135,463	144,844	1,069	18.78	1.33
Oklahoma.....	191,987	427,608	2,227	39.45	3.94
Texas.....	436,033	885,122	2,030	35.25	8.16
MOUNTAIN					
Montana.....	57,677	7,901	137	2.81	.07
Idaho.....	42,106	92,280	2,192	35.40	.85
Wyoming.....	15,748	23,511	1,493	15.34	.22
Colorado.....	59,934	135,142	2,255	22.51	1.25
New Mexico.....	29,844	35,965	1,205	24.45	.33
Arizona.....	9,975	31,251	3,133	14.09	.29
Utah.....	25,662	48,107	1,875	20.71	.44
Nevada.....	3,163	10,610	3,354	16.13	.10
PACIFIC					
Washington.....	66,288	165,031	2,490	15.48	1.52
Oregon.....	50,206	91,024	1,813	16.35	.84
California.....	117,670	410,091	3,485	14.60	3.78

TABLE 8  
ANALYSIS OF INCOME BY GEOGRAPHICAL DIVISIONS, 1919

Geographical divisions	Total income (thousands)	Population Jan. 1, 1920	Per capita income	Per cent of total national income	Per cent of total population	Number of persons gainfully employed	Average income per person gainfully employed	Per cent of income in each division, exclusive of farmers' and farm-laborers' income received by non-agricultural persons having over \$2,000 per year
United States.....	\$66,252,601	105,710,620	\$627	100.00	100.00	41,609,192	\$1,592	35.63
New England.....	5,358,511	7,400,909	724	8.09	7.00	3,234,282	1,657	35.76
Middle Atlantic.....	17,424,981	22,261,144	783	26.30	21.06	9,241,531	1,886	38.16
East North Central.....	14,681,293	21,475,543	684	22.16	20.31	8,513,006	1,725	32.26
West North Central.....	7,650,410	12,544,249	610	11.55	11.87	4,587,459	1,668	37.84
South Atlantic.....	6,473,303	13,990,278	463	9.77	13.23	5,339,182	1,212	33.83
East South Central.....	3,239,774	8,893,307	364	4.89	8.41	3,310,625	979	31.04
West South Central.....	5,030,057	10,242,224	491	7.59	9.60	3,716,185	1,354	35.95
Mountain.....	1,962,585	3,336,101	588	2.96	3.16	1,254,995	1,564	35.40
Pacific.....	4,431,687	5,566,871	796	6.69	5.27	2,411,927	1,837	36.90

TABLE 9  
ANALYSIS OF INCOME OF FARMERS BY GEOGRAPHICAL DIVISIONS, 1919

Geographical divisions	Number of farmers	Total income of farmers (thousands)	Average income per farmer	Per cent of total division income going to farmers	Per cent of total farmers' income
United States.....	6,448,366	\$10,851,096	1,682	16.38	100.00
New England.....	156,564	181,801	1,161	3.39	1.68
Middle Atlantic.....	425,149	664,251	1,562	3.81	6.12
East North Central.....	1,084,744	2,128,053	1,962	14.49	19.61
West North Central.....	1,096,973	2,520,915	2,298	32.95	23.23
South Atlantic.....	1,158,976	1,554,688	1,341	24.02	14.33
East South Central.....	1,051,600	1,022,582	972	31.56	9.42
West South Central.....	996,087	1,727,893	1,735	34.35	15.92
Mountain.....	244,109	384,767	1,576	19.61	3.55
Pacific.....	234,164	666,146	2,845	15.03	6.14















